INDEX OF AUTHORS — VOLUME 6

A

AHMED, M. M. *See* LING and AHMED, 361
AMES, A. *See* STEINMAN and AMES, 137
ARNOTT, H. J. *See* SMITH and ARNOTT, 193
ASHHURST, D. E. and COSTIN, N. M. The development of a collagenous connective tissue in the locust, *Locusta migratoria*, 279

B

BACCETTI, B., DALLAI, R., GIUSTI, F. and BERNINI, F. The spermatozoon of arthropoda. XXV. A new model of tail having up to 170 doublets: *Monarthropalpus buxi*, 269
BERNINI, F. *See* BACCETTI, DALLAI, GIUSTI and BERNINI, 269
BIRGE, W. J. and DOOLIN, P. F. The ultrastructural differentiation of the endoplasmic reticulum in choroidal epithelial cells of the chick embryo, 335
BOCK, W. J. *See* HIKADA and BOCK, 411
BRINTON, L. P., BURGDORFER, W. and OLIVER, J. H. Histology and fine structure of spermatozoa and egg passage in the female tract of *Dermacentor andersoni* Stiles (Acari, Ixodidae), 109
BROWNELL, P. H. and FARLEY, R. D. The organization of the malleolar sensory system in the solpugid, *Chanbria* sp., 471
BUCANA, C. D., NADAKAVUKAREN, M. J. and FREHN, J. L. Novel features of hamster pinealocyte ultrastructure, 85
BUCKLEY, I. K. Subcellular motility: a correlated light and electron microscopic study using cultured cells, 1
— and WALTON, J. R. A simple method for culturing chick embryo liver and kidney parenchymal cells for microscopic studies, 641
BURGDORFER, W. *See* BRINTON, BURGDORFER and OLIVER, 109
BYRAM, J. E. and FISHER, F. M. The absorptive surface of *Moniliformis dubius* (Acanthocephala). II. Functional aspects, 21

C

CAYER, M. *See* SMITH, NJOGU, CAYER and JÄRLFORS, 223
CHALLICE, C. E. and VIRÁGH, S. The architectural development of the early mammalian heart, 447
CHET, I. *See* KISLEV and CHET, 209
CHEUNG, W. W. K. *See* MARSHALL and CHEUNG, 153
COLEMAN, G. S. *See* HALL, WEST and COLEMAN, 243
COLEMAN, S. E., DUGGAN, J. and HACKETT, R. L. Freeze-fracture study of changes in nuclei isolated from ischemic rat kidney, 521
COOP, A. C. *See* STAY and COOP, 669
CORBIÈRE-TICHANÉ, G. Fine structure of an antennal sensory organ ('vésicule olfactive') of *Speophyes ludidulus* Delar. (Cave *Coleoptera* of the *Bathysciinae* subfamily), 535
COSTIN, N. M. *See* ASHHURST and COSTIN, 279
CRAPPER, D. R. *See* DEBONI, SCOTT and CRAPPER, 383

D

DALLAI, T. *See* BACETTI, DALLAI, GIUSTI and BERNINI, 269
DAVEY, K. G. *See* WEBB and DAVEY, 587
—. *See* TOBE and DAVEY, 255
DEBONI, U., SCOTT, J. W. and CRAPPER, D. R. Illuminated microelectrode for tissue culture, 383
DHAINAUT-COURTOIS, N. *See* TOMBES and DHAINAUT-COURTOIS, 653
DICKENS, J. C. and EATON, J. L. Fine structure of ocelli in sphinx moths, 463
DIXON, B. *See* VERON, O'FARRELL and DIXON, 613
DOOLIN, P. F. *See* BIRGE and DOOLIN, 335
DUGGAN, J. *See* COLEMAN, DUGGAN and HACKETT, 521
DUNKELBERGER, D. G. and WATABE, N. An ultrastructural study on spicule formation in the pennatulid colony *Renilla reniformis*, 573

E

EATON, J. L. *See* DICKENS and EATON, 463
ECKERT, B. S. and MCGEE-RUSSELL, S. M. Shell structure in *Difflugia lobostoma* as observed by scanning and transmission electron microscopy, 215
ELDRED, W. D. and MORAN, D. T. Fibre analysis and ultrastructure of an insect peripheral nerve, 751

F

FARLEY, R. D. *See* BROWNELL and FARLEY, 471
FISHER, F. *See* BYRAN and FISHER, 21
FREHN, J. L. *See* BUCANA, NADAKAVUKAREN and FREHN, 85

G

GADZAMA, N. M. and HAPP, G. M. The structure and evacuation of the spermatophore of *Tenebrio molitor* L. (Coleoptera: Tenebrionidae) 95
GIUSTI, F. *See* BACCETTI, DALLAI, GIUSTI and BERNINI, 269
GOLDING, D. W. and WHITTLE, A. C. Neurons with 'secretory end-feet'—a probable neuroendocrine complex in *Nereis*, 599

H

HACKETT, R. L. *See* COLEMAN, DUGGAN and HACKETT, 521
HALL, F. J., WEST, J. and COLEMAN, G. S. Fine structural studies on the digestion of chloroplasts in the rumen ciliate *Entodinium caudatum*, 243
HAKIM, R. S. and KAFATOS, F. C. The structure and salivary function of the labial gland in adult *Manduca sexta*, 729
HAPP, G. M. *See* GADZAMA and HAPP, 95
HERNANDEZ-NICAISE, M.-L. Ultrastructural evidence for sensory-motor neuron in ctenophora, 43
HESS, R. T. and VENA, J. A. Fine structure of the clitellum of the annelid *Enchytraeus fragmentosus*, 503
HIKADA, R. S. and BOCK, W. J. Analysis of fibre types in the pigeon's metapatagialis muscle. I. Histology, histochemistry, end plates and ultrastructure, 411

J

JÄRLFORS, U. *See* SMITH, NJOGU, CAYER and JÄRLFORS, 223

K

KAFATOS, F. C. *See* HAKIM and KAFATOS, 729
KALLENBACH, E. Fine structure of rat incisor ameloblasts in transition between enamel secretion and maturation stages, 173
KENNEY, T. P. and SHIVERS, R. R. The blood-brain barrier in a reptile, *Anolis carolinensis*, 319
KIM, W. K. *See* PALIWAL and KIM, 391
KISLEV, N. and CHET, I. Scanning electron microscopy of freeze-fractured sclerotia of *Physarum polycephalum*, 209
KITTINGER, G. W. *See* TSENG and KITTINGER, 551

L

LANE, N. J. *See* SKAER and LANE, 695
LEDGER, P. W. Types of collagen fibres in the calcareous sponges *Sycon* and *Leucandra*, 385
LETOURNEAU, P. C. *See* WESSELLS, LUDUEÑA, LETOURNEAU, WRENN and SPOONER, 757
LING, E. A. and AHMED, M. M. Neuroglia in the corpus callosum of the primate, slow loris (*Nycticebus coucang coucang*), 361
—, The subependyma of the primate, slow loris (*Nycticebus coucang coucang*), 371
LUDUENA, M. A. *See* SPOONER, LUDUEÑA and WESSELLS, 399
—. *See* WESSELLS, LUDUEÑA, LETOURNEAU, WRENN and SPOONER, 757

M

MARSHALL, A. T. and CHEUNG, W. W. K. Studies on water and ion transport in homopteran insects: ultrastructure and cytochemistry of the cicadoid and cercopoid Malpighian tubules and filter chamber, 153
— and WRIGHT, A. Ultrastructure changes associated with osmoregulation in the hindgut cells of a salt-water insect, *Ephydrella* sp. (Ephydridae: Diptera), 301
MCGEE-RUSSELL, S. M. *See* ECKERT and MCGEE-RUSSELL, 215
MORAN, D. T. *See* ELDRED and MORAN, 751
MORIBER, L. G. *See* TANDLER and MORIBER, 557
MISCH, D. W. *See* NOPANITAYA and MISCH, 487
MYERS, P. R. Dopamine: localization of uptake in the pedal ganglion of *Quadrula pustulosa* (Pelecypoda), 49

N

NADAKAVUKAREN, M. J. *See* BUCANA, NADAKAVUKAREN and FREHN, 85
NICKERSON, P. A. Filament-containing chromophobe in anterior pituitary of the guinea pig, 663
NJOGU, A. R. *See* SMITH, NJOGU, CAYER and JÄRLFORS 223
NOPANITAYA, W. and MISCH, D. W. Developmental cytology of the midgut in the flesh-fly, *Sarcophaga bullata* (Parker), 487

O

O'FARRELL, A. F. *See* VERON, O'FARRELL and DIXON, 613
OLIVER, J. H. *See* BRINTON, BURGDORFER and OLIVER, 109

P

PALIWAL, Y. C. and KIM, W. K. Scanning electron microscopy of differentiating and nondifferentiating uredosporelings of wheat stem rust fungus (*Puccinia graminis* F. sp. *tritici*) on an artificial substrate, 391
PASTEELS, J. J. and PASTEELS, J. M. Etude au microscope électronique à balayage des scopas abdominales chez nombreuses espèces d'abeilles (Apoidea, Megachilidae), 65
PASTEELS, J. M. *See* PASTEELS and PASTEELS, 65

R

ROUTTENBERG, A. and TARRANT, S. Synaptic morphology and cytoplasmic densities: rapid post-mortem effects, 777

S

SCOTT, J. W. *See* DEBONI, SCOTT and CRAPPER, 383
SHAW, K. The fine structure of muscle cells and their attachments in the tardigrade *Macrobiotus hufelandi*, 431
SHIVERS, R. R. *See* KENNEY and SHIVERS, 319
SHAER, H. LE B. and LANE, N. J. Junctional complexes, perineurial and glia-axonal relationships and the ensheathing structures of the insect nervous system; A comparative study using conventional and freeze-cleaving techniques, 695
SMITH, D. S., NJOGU, A. R., CAYER, M. and JÄRLFORS, U. Observations on freeze-fractured membranes of a trypanosome, 223
SMITH, H. E. and ARNOTT, H. J. Axostyle structure in the termite protozoon *Pyrsonympha vertens*, 193
SMITH, M. A. A preliminary report on complex fibrillar aggregates in the cell epithelium of *Panulirus interruptus* (Randall), 515
SMITAL, R. S. Fine structure of the Malpighian tubules in the housefly, *Musca domestica*, 719
SPOONER, B. S., LUDUEÑA, M. A. and WESSELLS, N. K. Membrane fusion in the growth cone microspike region of embryonic nerve cells undergoing axon elongation in cell culture, 399
— *See* WESSELLS, LUDUEÑA, LETOURNEAU, WRENN and SPOONER, 757
STAY, B. and COOP, A. C. 'Milk' secretion for embryogenesis in a viviparous cockroach, 669
STEINMAN, L. and AMES, A. The sites of synthesis and the subsequent migration of newly synthesized protein in retina, 137
SUMIMOTO, K. *See* WAKU and SUMIMOTO, 127

T

TANDLER, B. and MORIBER, L. G. Ultrastructure of pseudochromosomes and calottes in spermatogenic cells of the water-boatman, *Notonecta undulata* (Say), 399
TARRANT, S. *See* ROUTTENBERG and TARRANT, 777
TOBE, S. S. and DAVEY, K. G. Autoradiographic study of protein synthesis in abdominal tissues of *Glossina austeni*, 255
TOMBES, A. S. and DHAINAUT-COURTOIS, N. The fine structure of the infracerebral complex of *Perinereis cultrifera* Grube (Annelida: Polychaeta): C_1 and C_2 cells, 653
TSENG, M. and KITTINGER, G. W. Crystalline inclusions in the pituitary gonadotrophs of estrogen-primed spayed rhesus monkeys (*Macaca mulatta*), 551
TURBECK, B. O. A study of the concentrically laminated concretions, 'spherites', in the regenerative cells of the midgut of lepidopterous larvae, 627

V

VENA, J. A. *See* HESS and VENA, 503
VERON, J. E. N., O'FARRELL, A. F. and DIXON, B. The fine structure of Odonata chromatophores, 613
VIRAGH, S. *See* CHALLICE and VIRÁGH, 447

W

WAKU, Y. and SUMIMOTO, K. Metamorphosis of midgut epithelial cells in the silkworm (*Bombyx mori* L.) with special reference to the calcium salt deposits in the cytoplasm. II. Electron microscopy, 127
WALTON, J. R. *See* BUCKLEY and WALTON, 641
WATABE, N. *See* DUNKELBERGER and WATABE, 573
WEBB, R. A. and DAVEY, K. G. Ciliated sensory receptors of the unactivated metacestode of *Hymenolepis microstoma*, 587
WESSELLS, N. K. *See* SPOONER, LUDUEÑA and WESSELLS, 399
—, LUDUEÑA, M. A., LETOURNEAU, P. C., WRENN J. T. and SPOONER, B. S. Thorotrast uptake and transit in embryonic glia, heart fibroblasts and neurons *in vitro*, 757
—,
WEST, J. *See* HALL, WEST and COLEMAN, 243
WHITTLE, A. C. *See* GOLDING and WHITTLE, 599
WRENN, J. T. *See* WESSELLS, LUDUEÑA, LETOURNEAU, WRENN and SPOONER, 757
WRIGHT, A. *See* MARSHALL and WRIGHT, 301

INDEX OF SUBJECTS

VOLUME

A

Abdominal scopas, SEM study of, in several species of bees (Apoidea, Megachilidae), 65
Absorption, the absorptive surface of *Moniliformis dubius* (Acanthocephala). II. Functional aspects, 21
Acanthocephala, *Moniliformis dubius*, absorptive surface of. II. Functional aspects, 21
Ameloblasts, rat incisor, fine structure of, in transition between enamel secretion and maturation stages, 173
Annelid, *Enchytraeus fragmentosus*, fine structure of the clitellum of, 503
—, *Nereis*, 599
—, *Perinereis cultrifera* Grube (Polychaeta), 653
Anolis carolinensis, 319
Antennal sensory organ, fine structure of, 535
Arachnid, *Dermacentor andersoni* (Acari, Ixodidae), 109
—, solpugid, *Chanbria* sp., 471
Attachments, of muscle cells, in a tardigrade, 431
Autoradiography, in study of protein synthesis, 255
Axon elongation, membrane fusion in the growth cone-microspike region of embryonic nerve cells undergoing, in cell culture, 399
Axostyle, structure in the termite protozoon *Pyrsonympha vertens*, 193

B

Blood-brain barrier, in a reptile, *Anolis carolinensis*, 319
Bombyx mori, 127

C

Calcium, salt deposits, in metamorphosis of midgut epithelial cells in the silkworm, 127
Calottes, and pseudochromosomes, ultrastructure of, in the water-boatman, *Notonecta undulata*, 557
Chanbria sp., solpugid, 471
Chick embryo, differentiation of the ER in choroidal epithelial cells of, 335
—, liver and kidney parenchymal cells, a simple method for culturing, 641
Chloroplasts, fine structural studies on the digestion of, in the rumen ciliate *Entodinium caudatum*, 243
Choroidal epithelial, differentiation of the ER in the chick embryo, 335
Chromatophores, Odonata, the fine structure of, 61
Chromophobe, filament-containing, in anterior pituitary of the guinea pig, 66
Ciliated receptors, sensory, of the unactivated metacestode of *Hymenolepis microstoma*, 5
Circulatory system, the architectural development of the early mammalian heart, 44
Clitellum, fine structure of, in the annelid *Enchytraeus fragmentosus*, 50
Collagen, fibers, types of, in the calcareous sponge *Sycon* and *Leucandra*, 3
—, in connective tissue in the locust, development of, 2
Connective tissue, collagenous, the development of, in the locust, *Locusta migratoria*, 27
Corpus callosum, of the primate, slow loris (*Nycticebus coucang coucang*), neuroglia in, 36
Crustacea, *Panulirus interruptus*, 51
Crystalline inclusions, in the pituitary gonadotrophs of estrogen-primed spayed rhesus monkeys (*Macaca mulatta*), 53
Ctenophora, ultrastructural evidence for a sensory-motor neuron in, 4
Cultured cells, subcellular motility of, a correlated light and electron microscopic study, 1

D

Dermacentor andersoni, (Acari, Ixodidae), 10
Development, of the early mammalian heart, 44
—al cytology, of the midgut in the flesh-fly, *Sarcophaga bullata* (Parker), 4
Differentiating, and nondifferentiating uredosporelings of wheat stem rust fungus, 39
Differentiation, ultrastructural, of the ER in choroidal epithelial cells of the chick embryo, 33
Difflugia lobostoma, shell structure in, as observed by scanning and transmission electron microscopy, 2
Digestion, of chloroplasts in the rumen ciliate, fine structural studies on, 24
Digestive system, metamorphosis of midgut epithelial cells in the silkworm (*Bombyx mori*), 12
—, of the flesh-fly *Sarcophaga bullata*, 4
Dopamine, localization of uptake in the pedal ganglion of a pelecypod, 4
Doublets, of spermatozoon tail of *Monarthropalpus buxi*, 20

E

gg, passage in the female tract of *Dermacentor*, and histology and fine structure of spermatozoa, 109
mbryo, chick, differentiation of the ER in choroidal epithelial cells of, 335
, —, liver and kidney parenchymal cells, a simple method of culturing, for microscopic studies, 641
mbryogenesis, in a viviparous cockroach, 'milk' secretion for, 669
mbryonic, glia and heart fibroblasts and spinal ganglion neurones, *in vitro*, thorotrast uptake and transit in, 757
, nerve cells, membrane fusion in the growth cone-microspike region of, 399
namel, secretion and maturation stages, in rat incisor ameloblasts, 173
nchytraeus fragmentosus, annelid, 503
d plates, in the pigeon's metapatagialis muscle, 411
doplasmic reticulum, the ultrastructural differentiation of, in choroidal epithelial cells of the chick embryo, 335
ntodinium caudatum, rumen ciliate, fine structural studies on the digestion of chloroplasts in, 243
xcretory system, cicadoid and cercopoid Malpighian tubules and filter chamber, studies on water and ion transport in, 153
—, Malpighian tubules of the housefly, *Musca domestica*, 719

F

bre, analysis, and ultrastructure, of an insect peripheral nerve, 751
, types, analysis of, in the pigeon's metapatayialis muscle, 411
-s, collagen, types of, in the calcareous sponges *Sycon* and *Leucandra*, 385
ibrillar aggregates, complex, in the gill epithelium of *Panulirus interruptus*, 515
broblasts, in embryonic glia and heart, thorotrast uptake and transit in, 757
reeze-cleaving, studies on the insect nervous system, 695
reeze-fracture, of sclerotia of *Physarum polycephalum*, SEM of, 209
—, study of changes in nuclei isolated from ischemic rat kidney, 521
—d membranes, of a trypanosome, observations on, 223
ungus, rust, *Puccinia graminis*, SEM of, 391

G

anglion, pedal, of *Quadrula* (Pelecypoda), localization of uptake of dopamine in, 49
ill epithelium, of *Panulirus interruptus*, complex fibrillar aggregates in, 515
and, labial, in adult *Manduca sexta*, the structure and salivary function of, 729
Glia, embryonic, *in vitro*, 757
Glossina austeni, 255
Gonadotrophs, pituitary, of estrogen-primed spayed rhesus monkeys, crystalline inclusions in, 551
Guinea pig, filament-containing chromophobe in anterior pituitary of, 663

H

Hamster, novel features of pinealocyte ultrastructure in, 85
Heart, early mammalian, the architectural development of, 447
Hindgut, ultrastructural changes associated with osmoregulation, in a saltwater insect *Ephydrella* sp., 301
Hymenolepis microstoma, metacestode of, 587

I

Infracerebral complex, of *Perinereis cultrifera* Grube (Annelida: Polychaeta): C_1 and C_2 cells, the fine structure of, 653
Insect, (*Bombyx mori* L.) metamorphosis of midgut epithelial cells of, with special reference to the calcium salt deposits in the cytoplasm, 127
—, concentrically laminated concretions in the midgut of lepidopterous larvae, 627
—, *Ephydrella* sp. (Ephydridae: Diptera), 301
—, fine structure of Malpighian tubules in the housefly, *Musca domestica*, 719
—, *Glossina austeni*, 255
—, *Locusta migratoria*, development of a collagenous connective tissue in, 279
—, *Manduca sexta*, 729
—, 'milk' secretion for embryogenesis in a viviparous cockroach, 669
—, *Monarthropalpus buxi*, model of tail of spermatozoon of, 269
——, *Notonecta undulata*, 557
—, Odonata, fine structure of chromatophores of, 613
——, *Sarcophaga bullata* (Parker), 487
—, *Speophyes ludiculus*, 535
—, Sphinx moths, fine structure of ocelli in, 463
—, (*Tenebrio molitor*), structure and evacuation of the spermatophore of, 95
—s, (Apoidea, Megachilidae), SEM study of abdominal scopas in, 65
—, Homopteran, studies of water and ion transport in: ultrastructure and cytochemistry of the cicadoid and cercopoid Malpighian tubules and filter chamber, 153
Ion, and water transport, in homopteran insects, 153

J

Junctional complexes, perineurial and glia-axonal relationships and the ensheathing structures of the insect nervous system, 695

K

Kidney, chick embryo, a simple method for culturing, 641
—, ischaemic, of rat, freeze-fracture study of changes in, 521

L

Labial gland, in adult *Manduca sexta*, the structure and salivary function of, 729
Leucandra, calcareous sponge, 385
Liver, chick embryo, a simple method for culturing, 641
Locusta migratoria, 279

M

Macaca mulatta, rhesus monkey, 551
Macrobiotus hufelandi, tardigrade, 431
Malleolar sensory system, organization of, in the solpugid, *Chanbria* sp., 471
Malpighian tubules, in the housefly, *Musca domestica*, fine structure of, 719
Manduca sexta, adult, the structure and salivary function of the labial gland in, 729
Membrane fusion, in the growth cone-microspike region of embryonic nerve cells undergoing axon elongation in cell culture, 399
Membranes, freeze-fractured, of a trypanosome, observations on, 223
Metacestode, of *Hymenolepis microstoma*, ciliated sensory receptors of, 587
Metamorphosis, of midgut epithelial cells in the silkworm (*Bombyx mori* L.) with special reference to the calcium salt deposits in the cytoplasm. II. Electron microscopy, 127
Microelectrode, illuminated, for tissue culture, 383
Midgut, developmental cytology of, in the flesh-fly *Sarcophaga bullata*, 487
—, epithelial cells, metamorphosis of, in the silkworm, 127
—, of lepidopterous larvae, concentrically laminated concretions in, 627
Milk, secretion of, for embryogenesis in a viviparous cockroach, 669
Mollusca, *Quadrula pustulosa* (Pelecypoda), pedal ganglion of, 49
Monarthropalpus buxi, (Diptera), 269
Moniliformis dubius, (Acanthocephala), 21
Motility, subcellular, a correlated light and electron microscopic study using cultured cells, 1
Musca domestica, housefly, 719
Muscle, metapatagialis, analysis of fibre types in the pigeon's. I. Histology, histochemistry, end plates and ultrastructure, 411
— cells, and their attachments, the fine structure of, in the tardigrade *Macrobiotus hufelandi*, 431

N

Nereis, a probable neuroendocrine complex in, 599
Nerve, peripheral, of an insect, fiber analysis and ultrastructure of, 751
— cells, embryonic membrane fusion in the growth cone-microspike region of, in cell culture, 399
Nervous system, fibre analysis and ultrastructure of an insect peripheral nerve, 751
— —, insect, a comparative study of, using conventional and freeze-cleaving techniques, 691
— —, insect, junctional complexes, perineurial and glia-axonal relationships and the ensheathing structures of; a comparative study using conventional and freeze-cleaving techniques, 691
— —, Neuroglia in the corpus callosum of the primate, slow loris, 361
— —, neurons with 'secretory end-feet'—a probable neuroendocrine complex in *Nereis*, 599
— —, pedal ganglion of *Quadrula pustulosa*, localization of uptake of dopamine in, 49
— —, sensory-motor neuron in Ctenophora, 475
— —, synaptic morphology and cytoplasmic densities, rapid post-mortem effects, 771
— —, the blood-brain barrier in a reptile, *Anolis carolinensis*, 311
— —, the fine structure of the infracerebral complex of *Perinereis cultrifera* Grube (Annelida: Polychaeta) C_1 and C_2 cells, 653
— —, the subependyma of the primate, slow loris (*Nycticebus coucang coucang*), 371
— —, thorotrast uptake and transit in embryonic glia and heart fibroblasts and spinal ganglion neurones *in vitro*, 751
— —, sensory, fine structure of an antennal sensory organ ('vesicule olfactive') of *Speophyes lucidulus* (Cave *Coleoptera* of the *Bathysciinae* sub-family) 53
— —, —, fine structure of ocelli in sphinx moth 46
— —, —, in the solpugid, *Chanbria* sp., 47
Neuroendocrine complex, a probable, in *Nereis*, 599
Neuroglia, in the corpus callosum of the primate, slow loris (*Nycticebus coucang coucang*), 361
Neuron, sensory-motor, evidence for, in Ctenophora 47
——s, embryonic spinal, *in vitro*, 751
—, with 'secretory end-feet', a probable neuroendocrine complex in *Nereis*, 599
Notonecta undulata, 557
Nuclei, freeze-fracture study of changes in, isolated from ischemic rat kidney, 521
Nycticebus coucang coucang, slow loris, 361, 371

O

Ocelli, fine structure of, in sphinx moths, 461
Odonata, fine structure of chromatophores of, 613
Osmoregulation, ultrastructural changes associated with, in the hindgut cells of a saltwater insect, *Ephydrella* sp. (Ephydridae: Diptera), 301

P

Panulirus interruptus, 515
Perinereis cultrifera (Annelida: Polychaeta), 653

Physarum polycephalum, SEM of freeze-fractured sclerotia of, 209
Pigeon, metapatagialis muscle of, 411
Pinealocyte, novel features of, in hamster, 85
Pituitary, anterior, of the guinea pig, filament-containing chromophobe in, 663
—, gonadotrophs, crystalline inclusions in, of estrogen-primed spayed rhesus monkeys (*Macaca mulatta*), 551
Post-mortem effects, rapid, synaptic morphology and cytoplasmic densities, 777
Primate, rhesus monkey, 551
—, slow loris, neuroglia in the corpus callosum of, 361
— —, the subependyma in, 371
Protein, newly synthesized, in retina, sites of synthesis and the subsequent migration of, 137
—, synthesis, autoradiographic study of, in abdominal tissues of *Glossina austeni*, 255
Protozoa, *Difflugia lobostoma*, shell structure in, as observed by scanning and transmission electron microscopy, 215
—, *Entodinium caudatum* (rumen ciliate), 243
Protozoon, *Pyrsonympha vertens*, axostyle structure in, 193

Q

Quadrula pustulosa, (Pelecypoda), 49

R

Rat, incisor ameloblasts, fine structure of, in transition between enamel secretion and maturation stages, 173
—, ischemic kidney of, freeze-fracture study of changes of nuclei in, 521
Regenerative cells, of the midgut of lepidopterous larvae, a study of concentrically laminated concretions, 'spherites' in, 627
Renilla reniformis, pennatulid colony, spicule formation in, 573
Reproductive system, histology and fine structure of spermatozoa and egg passage in the female tract of *Dermacentor andersoni* Stiles (Acari, Ixodidae), 109
— —, structure and evacuation of the spermatophore of an insect, 95
— —, the spermatozoon of arthropoda. A new model of tail having up to 170 doublets: *Monarthropalpus buxi*, 269
— —, ultrastructure of pseudochromosomes and calottes in spermatogenic cells of the water-boatman, *Notonecta undulata*, 557
Reptile, *Anolis carolinensis*, blood-brain barrier in, 319
Retina, the sites of synthesis and subsequent migration of newly synthesized protein in, 137

S

Sarcophaga bullata, flesh fly, 487
Sclerotia, freeze-fractured, of *Physarum polycephalum*, SEM of, 209
Secretion, of enamel, and maturation stages, fine structure of rat incisor ameloblasts in transition between, 173
—, of 'milk', for embryogenesis, in a viviparous cockroach, 669
SEM, of a trypanosome, 223
—, of abdominal scopas in several species of bees (Apoidea, Megachilidae), 65
—, of differentiating and nondifferentiating uredosporelings of wheat stem rust fungus (*Puccinia graminis* F. Sp. *tritici*), 391
—, of freeze-fractured sclerotia of *Physarum polycephalum*, 209
—, shell structure of *Difflugia lobostoma* observed by, 215
Sensory-motor neuron, ultrastructural evidence for, in Ctenophora, 43
Sensory organ, antennal, ('vesicule olfactive'), fine structure of, in *Speophyes lucidulus* Delar., (Cave Coleoptera of the Bathysciinae subfamily), 535
Sensory receptors, ciliated, of the unactivated metacestode of *Hymenolepis microstoma*, 587
Sensory system, malleolar, organization of, in the solpugid, *Chanbria* sp., 471
Slime mold, *Physarum polycephalum*, sclerotia of, 209
Speophyes lucidulus, Coleoptera: Bathysciinae, 535
Spermatogenic cells, of the water-boatman *Notonecta undulata*, ultrastructure of pseudochromosomes and calottes in, 557
Spermatophore, of *Tenebrio molitor* L. (Coleoptera: Tenebrionidae), structure and evacuation of, 95
Spermatozoa, Histology and fine structure of, and egg passage in the female tract of *Dermacentor andersoni*, 109
Spermatozoon, of arthropoda. XXV. A new model of tail having up to 170 doublets: *Monarthropalpus buxi*, 269
Spherites, a study of concentrically laminated concretions, in the regenerative cells of the midgut of lepidopterous larvae, 627
Spicule, formation of, in the pennatulid colony *Renilla reniformis*, an ultrastructural study, 573
Sponges, calcareous, *Sycon* and *Leucandra*, types of collagen fibers in, 385
Subependyma, of the primate slow loris (*Nycticebus coucang coucang*), 371
Surface, absorptive, of *Moniliformis dubius*, 21
Sycon, calcareous sponge, 385
Synaptic morphology, and cytoplasmic densities: rapid post-mortem effects, 777
Synthesis, protein, autoradiographic study of, in abdominal tissues of *Glossina austeni*, 255
—, —, sites of, and subsequent migration of, in retina, 137

T

Tail, of spermatozoon of arthropod, 269
Tardigrade, *Macrobiotus hufelandi*, 431
Teeth, of rat, enamel secretion and maturation stages in, 173
Tenebrio molitor, (Coleoptera: Tenebrionidae), 95
Thorotrast, uptake and transit in embryonic glia heart fibroblasts and spinal ganglion neurones *in vitro*, 757
Tissue, connective, the development of in the locust, *Locusta migratoria*, 279
— culture, illuminated microelectrode for, 383
— —, of embryonic nerve cells, membrane fusion in the growth cone-microspike region of, 399
— —, thorotrast uptake and transit in embryonic gli and heart fibroblasts and in embryonic spin ganglion neurones *in vitro*, 75
Transport, of water and ions, in cicadoid and cercopoi Malpighian tubules and filter chamber, 15
Trypanosome, observations on freeze-fractured mem branes of, 22

U

Uredosporelings, differentiating and nondifferentiat ing, of wheat stem rust fungus, 39

W

Water, and ion transport, in homopteran insects, 15

BJECT
ryonic gl
nic spin
75
cercopoi
15
ured mem
22
fferentiat
39
n insects,
15